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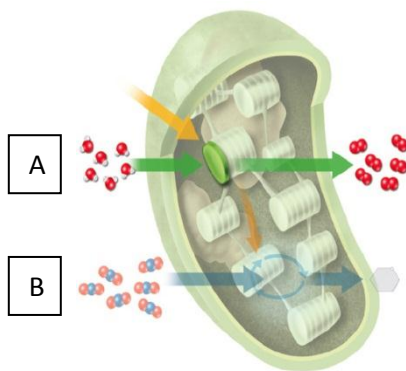
Period:

Chapter 4 Study Guide

What molecule carries chemical energy that cells use for their functions?

What molecule found in the food we eat is most commonly broken down to make ATP?

What directly provides energy needed for cell functions?



The water molecules, label A in Figure 4.1, are going to the thylakoids to take part in which process?

The carbon dioxide molecules, label B in Figure 4.1 are going to the thylakoids to take part in which process?

Where in a plant cells are the energy-absorbing molecules for photosynthesis located?

In what organelle does photosynthesis occur in?

What pigment absorbs sunlight for the process of photosynthesis?

Why are plants green?

What are the reactants in photosynthesis? What are the products?

What process allows hydrogen ions to move from the outside of the thylakoid membrane inside the thylakoid membrane?

What is the name of the cycle where glucose is made in photosynthesis?

What energy source molecules are used to make glucose?

What happens to the sugars that are made during photosynthesis?

The parts of cellular respiration that needs oxygen takes place inside the?

What process occurs in the cytoplasm and breaks down sugar molecules to enter into cellular respiration?

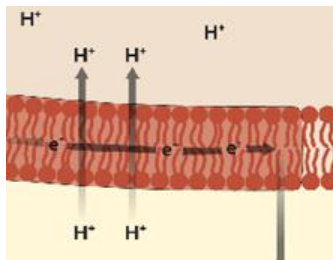
The word aerobic means _____ and the word anaerobic means _____.

What item enters the mitochondria to begin the process of cellular respiration?

What important protein helps a two carbon molecule enter the first stage of cellular respiration?

What is the name of the first stage of cellular respiration where oxygen is required?

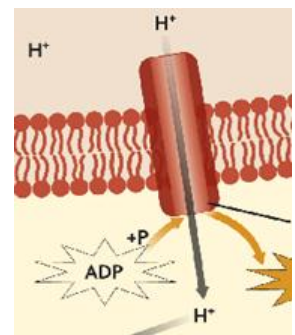
What two important molecules transport electron and hydrogen ion during cellular respiration?



What is the structure/process in the mitochondria that is being depicted above?

What process is being depicted when the hydrogen ions cross the mitochondrial membrane?

What do the hydrogen ions travel through to cross the mitochondrial membrane?



What is the proper naming of the structure that hydrogen ion travel through?

What energy molecule is formed when hydrogen ions pass through the structure in the picture above?

How many chemical energy molecules can one sugar molecule produce in cellular respiration?

What process is an anaerobic process?

The type of fermentation used by some animal cells as well as some bacteria is called...

Which type of fermentation release carbon dioxide as a waste product?

Write the equation for photosynthesis and label the parts that are reactants and products in the chemical reaction.

Write the equation for cellular respiration and label the parts that are reactants and the products in the chemical reaction.